IN THE CLAIMS

1. (Withdrawn) A system for air ionization, comprising:

an air ionizer;

an electrical power source;

a particle sensor for determining particulate levels in air; and

a control unit connected to the air ionizer, to the power source, and to the particle sensor, wherein the control unit utilizes signals from the particle sensor to control an amount of electrical energy supplied to the air ionizer.

2. (Withdrawn) A system according to Claim 1, wherein the control unit controls the amount of electrical energy by pulsing the electrical power source.

3. (Withdrawn) A system according to Claim 1, wherein the air ionizer comprise one or more ionization tubes.

4. (Withdrawn) A system according to Claim 1, further comprising an ozone sensor, wherein the control unit utilizes signals from the particle sensor and the ozone sensor to control the amount of energy

5. (Withdrawn) A system for air ionization, comprising:

an air ionizer;

an electrical power source;

a particle sensor for determining particulate levels in the air;

an oxidizable gas sensor for determining concentrations of oxidizable gas in the air; and

a control unit connected to the air ionizer, to the power source, to the particle sensor, and to the oxidizable gas sensor, wherein the control unit utilizes signals from the particle sensor and the oxidizable gas sensor to control an amount of electrical energy supplied to the air ionizer.

6. (Withdrawn) A system according to Claim 5, wherein the control unit controls the amount of electrical energy by pulsing the electrical power source.

7. (Withdrawn) A system according to Claim 5, wherein the air ionizer comprise one or more ionization tubes.

8. (Withdrawn) A system according to Claim 5, further comprising an ozone sensor, wherein the control unit utilizes signals from the particle sensor, the oxidizable gas sensor, and the ozone sensor to control the amount of electrical energy.

9. (Original) A method for improving air quality, comprising the steps of:

ionizing the air;

determining the particulate level in the air; and

utilizing the determined particulate level to control the amount of ionizing.

10. (Original) A method according to Claim 9, further comprising the step of determining the ozone level in the air, wherein the utilizing step utilizes the determined particulate level and the determined ozone level to control the amount of ionizing.

11. (Currently Amended) A method for improving air quality, comprising the steps of:

ionizing the air;

determining the particulate level in the air;

determining the concentration of oxidizable gas in the air; and

utilizing the determined particulate level and the determined oxidizable gas concentration to control the amount of ionizing.

12. (Original) A method according to Claim 11, further comprising the step of determining the ozone level in the air, wherein the utilizing step utilizes the determined particulate level, the determined oxidizable gas concentration, and the determined ozone level to control the amount of ionizing.